

ABSTRACT

[0075] The present invention relates to the use of α -conotoxin peptides having the general formula Xaa₁-Xaa₂-Cys-Cys-Xaa₃-Xaa₄-Pro-Xaa₅-Cys-Xaa₆-Xaa₇-Xaa₈-Xaa₉-Xaa₁₀-Xaa₁₁-Xaa₁₂-Cys (SEQ ID NO:1) for treating disorders regulated at neuronal nicotinic acetylcholine receptors. Such disorders include, but are not limited to, cardiovascular disorders, gastric motility disorders, urinary incontinence, nicotine addiction, mood disorders (such as bipolar disorder, unipolar depression, dysthymia and seasonal effective disorder) and small cell lung carcinoma, as well as the localization of small cell lung carcinoma. In this formula, Xaa₁ is des-Xaa₁, Tyr, mono-iodo-Tyr or di-iodo-Tyr, Xaa₂ is any amino acid, Xaa₃ is any amino acid, Xaa₄ is any amino acid, Xaa₅ is any amino acid; Xaa₆ is any amino acid, Xaa₇ is any amino acid, Xaa₈ is any amino acid, Xaa₉ is des-Xaa₉ or any amino acid, Xaa₁₀ is des-Xaa₁₀ or any amino acid, Xaa₁₁ is des-Xaa₁₁ or any amino acid and Xaa₁₂ is des-Xaa₁₂ or any amino acid. Disulfide linkages exist between the first and third cysteines and the second and fourth cysteines. Pro may be replaced with hydroxy-Pro. The C-terminus may contain a hydroxyl or an amide group, preferably an amide group.